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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,742	07/21/2003	Randal Howard Kerstetter III	DN2002101	7153

27280 7590 03/15/2005

THE GOODYEAR TIRE & RUBBER COMPANY
INTELLECTUAL PROPERTY DEPARTMENT 823
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EXAMINER

RAYFORD, SANDRA M

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 03/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/624,742	KERSTETTER ET AL.	
	Examiner	Art Unit	
	Sandra M. Nolan	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7-21-03 and 2-2-04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claims

1. Claims 1-20 are pending.

Priority

2. An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence(s) of the specification or in an application data sheet by identifying the prior application by application number (37 CFR 1.78(a)(2) and (a)(5)). If the prior application is a non-provisional application, the specific reference must also include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

Please add a reference to the earlier-filed U.S. application to the specification.

Information Disclosure Statement

3. The information disclosure statements (IDS's) submitted on 21 July 2003 and 02 February 2004 were considered by the examiner.

Summary of Base Claims

4. The base claims are claims 1 and 11.

Claim 1 covers a composite comprising:

- (1) textile fibers having an RFL adhesive on their surfaces,
- (2) a vulcanizable rubber composition comprising:
 - A. 50 to 100 parts polychloroprene,
 - B. 0 to 50 parts additional rubber, and
 - C. 0.1 to 40 parts hydrotalcite.

Art Unit: 1772

Claim 11 covers a method of adhering textile fibers to a vulcanizable rubber composition in a composite, which method employs the steps of:

- I. obtaining textile fibers having RFL adhesives on them, and
- II. contacting the fibers of I. With a vulcanizable rubber composition comprising:
 - A. 50 to 100 parts polychloroprene,
 - B. 0 to 50 parts additional rubber, and
 - C. 0.1 to 40 parts hydrotalcite.

5. Note: The examiner construes RFL adhesive to mean the adhesives taught by Chu (US 6,703,077) and referred to in the paragraph bridging pages 1 and 2 of the specification.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 2 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2 and 12 recite the limitation "said at least one additional rubber" in line 1 of each. There is insufficient antecedent basis for this limitation in the claims from which they depend because the additional rubber is an optional in claims 1 and 11.

Claim Rejections - 35 USC § 103

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 1772

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 1, 3-11 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi (US 5,348,779) in view of Chu et al (US 6,703,077).

Igarashi teaches refrigerant transport hoses (title) for automotive use (col. 1, line 14) that are made from compositions containing chloroprene rubber (col. 1, lines 30-33), and aramid fibers of spiral-knitted yarn (col. 5, lines 58-62). The hoses have rubber tubes next to the fibers (col. 4, lines 32-34). The compositions contain acid receptors, with magnesium oxide, lead oxide and hydrotalcite recites as useful receptors (col. 9, lines 27-29). The acid receptor is used in amounts of from 5 to 25% (col. 9, lines 54-56).

Aramid fibers are well-known nylon fibers.

The patent's "acid receptors" are deemed to be applicants' "acid acceptors".

Igarashi fails to teach RFL treatments on its fibers.

Chu teaches RFL treatments on fibers to bond them to rubbers (col. 1, lines 36-38). Polyamide and aromatic polyamide fibers are taught at col. 4, line 23.

Applicants' nylon is a well-known polyamide; aramid fibers are known to be made from aromatic polyamides.

The references are analogous because they both deal with reinforced rubber compositions.

Art Unit: 1772

It would have been obvious to one having ordinary skill in the art at the time of the invention to employ the RFL treatment of Chu on the aramid fibers in the compositions of Igarashi in order to improve the bonding of the chloroprene rubber to the fiber.

The motivation to employ the RFL treatment of Chu on the aramid fibers in the compositions of Igarashi is found at col. 1, lines 36-38, where RFL dips are said to be widely used to bond synthetic fabrics to rubber.

It is deemed desirable to make rubber automotive hoses in which the reinforcing fibers are bonded to the rubber well in order to improve the useful lives of the hoses.

The use of Chu's RFL treatment and Igarashi's ingredients suggests the process steps of applicants' claims 11 and 13-20.

10. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi and Chu as applied to claims 1, 3-11 and 13-20 above, and further in view of Miyata (US 4,558,102).

Igarashi and Chu are discussed above.

They fail to teach blends of polychloroprene with other rubbers.

Miyata teaches acid receptors in polychloroprene compositions (col. 1, lines 43-53), which compositions may employ polyepichlorohydrin rubber (col. 7, lines 38-40) instead of polychloroprene (col. 7, lines 43-44). Note the discussion at col. 4, lines 29-43, where a wide variety of rubbers are said to be useful in its compositions.

The references are analogous because they all deal with polychloroprene-containing compositions.

Art Unit: 1772

In the absence of convincing objective evidence to the contrary, it would have been obvious to one having ordinary skill in the art at the time of the invention to employ blends of the rubbers of Miyata instead of the polychloroprenes in the compositions and hoses suggested by the combination of Igarashi and Chu in order to lessen the amount of more expensive rubber ingredient and, thereby, lower the cost of hoses made therefrom.

The use of the RFL treatment of Chu and the blends suggested by Miyata in the Igarashi compositions is suggestive of the process of claim 12.

Citation as of Interest

11. Forste et al (US 5,280,083) is cited as teaching the use of lead oxide (col. 1 lines 32-38) in chloroprene rubber compositions (abstract) that also contain nylon reinforcement (col. 2, lines 58-62)

Conclusion

Any inquiry concerning this communication should be addressed to Sandra M. Nolan-Rayford, at telephone number 571/272-1495. She can be reached Monday through Thursday, from 6:30 am to 4:00 pm, ET.

If attempts to reach the examiner are unsuccessful, contact her supervisor, Harold Pyon, at 571/272-1498.

The fax number for patent application documents is 703/872-9306.

S. M. Nolan-Rayford
S. M. Nolan-Rayford
Primary Examiner
Technology Center 1700

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